

ON A COLLECTION OF LAND AND FRESHWATER MOLLUSCA
FROM JAVA.

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Read 14th June, 1912.

PLATE X.

DURING his stay in Java Mr. E. Jacobson collected amongst other objects of Natural History some molluscs, the majority consisting of land and freshwater species, which he had the kindness to send to me for identification and description; amongst them I found a few forms which appear to be new to science, and as the accurate localities give a real importance, even to the more common and already known species, I now give a list of all of them.

1. *VITRINOPSIS COLLINGEI*, n.sp. Pl. X, Figs. 1, 2.

Animal of a light flesh-coloured tint, which on its upper surface is only clearly visible beneath the shell and on the foot-fringe, the neck of a rather dark slate colour, as well as the upper tentacles, the sides of the anterior part mottled with faint spots of black pigment, the dorsal face of the caudal part nearly quite blackish, mantle blackish, with two lobes; right mantle-lobe large, strongly black-spotted, leaving only an arborescent figure of whitish colour; left lobe narrower, of the same colour, but of simpler pattern, with only a few light-coloured branches; caudal part sharp, pointed behind, without mucous pore, with a median dorsal groove of lighter colour, and oblique furrows, running from the median groove towards the posterior end; foot-fringe bordered above by a double, impressed line. Foot-sole divided in a narrow median and two lateral planes, flesh-coloured, darker behind. Shell depressed, thin, corneous; whorls slightly convex, four in number, of which about two form a large nucleus, which is microscopically spirally striated, the striæ being pitted; third whorl still finer and more remote, spirally striated with plain striæ, but as well as last whorl smooth and shining; last whorl with fine growth-lines, which are partly fold-like and with a crenulate infrasutural margin, bordered by a groove. Peristome thin, aperture depressed.

Length of animal about 30, breadth of foot 2.5 mm.; largest diameter of shell 8.5, height about 5 mm.

Hab.—Nongkodjadjar, Tengger Mountains, January, 1911. One specimen, in my collection.

This species has much puzzled me; the animal agrees in every respect with Semper's description of his genus *Vitrinopsis*, but the shell with his genus *Vitrinoidea*. I have provisionally located it in *Vitrinopsis*, as the mantle, though damaged, evidently consisted of two separated lobes. I thought it not advisable to create a new genus on a single damaged specimen. Mr. Jacobson has given the following interesting account of the living animal: "The slug was

found under the bark of a decayed tree. At its sides it has two peculiar, thin lobes, which, when the slug creeps undisturbed, are spread over each side of the shell, and cover a large part of it; if disturbed it partly retracts these lobes. If excited the slug is uncommonly active, writhing to the right and left, and violently moving the body like an earth-worm. I have never seen a slug which is so active in its movements. It cannot withdraw completely in the shell." As far as I know, this is the first species of the genus described from Java, though Strubell and Fruhstorfer may have found such.

2. XESTA DWIPANA, Gude.

Gude, Proc. Mal. Soc., vol. v, p. 264, pl. vii, figs. 15-17, 1903; v. Martens, Ostas. Landschn., p. 254 (*Jenyntsi*).

Hab.—Gunung Ungaran, September, 1910. Two specimens.

The specimens belong to the colour-variety, which has been named by Boettger v. *concolor*, without description, received from Fruhstorfer, from the Gunung Gedeh, as *Macrochlamys Jenynsi* v. *concolor*; it is characterized by its rather uniform yellowish-brown colour, without band. On comparison with Gude's descriptive table, I find Mr. Jacobson's specimens agree in every respect with the characters, and are quite different from *Martensia Jenynsi*, Pfr., of which species I could compare two East African specimens. In Journ. of Mal., vol. x, p. 53, 1903, Gude has recorded the species in his classified list of helicoid land shells of Asia as *Macrochlamys Dwipansis*.

3. HEMIPLECTA PATENS, v. Martens.

V. Martens, Archiv f. Naturgesch., 1891, p. 27, pl. iii, fig. 1.

Hab.—Nongkodjadjar, January, 1911. One specimen.

The only specimen is young, as may be judged by its very thin, partly broken peristome; it agrees as well as can be desired with the description and figure of v. Martens, but it is not quite 40 mm. in its largest diameter, has about half a whorl less, and the aperture is still more rounded; these differences, however, would disappear if the shell were full grown. It is nearly from the same locality as the type of v. Martens. It agrees with specimens received from Fruhstorfer as *H. gemina*, v. d. B., but not with the description and figure of Philippi (Abbild. neuer Conch., vol. i, p. 9, pl. i, fig. 1), the umbilicus being nearly closed, the last whorl much broader, sculpture different, etc. Professor Thiele, who had the kindness to compare my specimens with the only type of v. Martens, affirms my suggestion that it is *H. patens*.

4. HEMIPLECTA HUMPHREYSIANA, Lea, var.

Lea, Trans. Phil. Soc. Philadelphia, vii, p. 463, pl. xii, fig. 16, 1841; v. Martens, Ostas. Landschn., p. 233, pl. x, figs. 3, 4, 6.

Hab.—Nusa Kambangan, March, 1911. One specimen.

The specimen is young; it does not exactly agree with any of the figures I could compare, nearest perhaps in shape with var. *complanata*,

v. Martens (loc. cit., p. 234, pl. x, fig. 3); in sculpture it agrees with other specimens from Java, but in colour it is peculiar by a narrow brown line, just above the light-coloured peripheral zone, which is, however, much narrower than that in v. Martens' fig. 6 of v. *bifasciata*, which is very different in size and shape.

5. DYAKIA RUMPHII, v. d. Busch.

v. d. Busch in Philippi; *Abbild. neuer Conch.*, vol. i, p. 9, *Helix*, pl. i, fig. 2; Mousson, *Moll. von Java*, p. 18, pl. i, fig. 2; Reeve, *Conch. Icon.*, *Helix*, fig. 480; v. Martens, *Ostas. Landschn.*, p. 220; Pilsbry, *Man. Conch.*, ser. II, vol. II, p. 20, pl. III, fig. 38.

Hab.—Gunung Gedeh, March, 1911, one specimen; Gunung Ungaran, September, 1910, two specimens.

The specimens are very young, but easily recognizable.

6. DYAKIA CLYPEUS, Mousson.

Mousson, *Journ. de Conch.*, 1857, p. 156; v. Martens, *Ostas. Landschn.*, p. 227; Pfeiffer, *Nov. Conch.*, vol. IV, p. 27, pl. cxv, figs. 3-5; Pilsbry, *Man. Conch.*, ser. II, vol. II, p. 20, pl. III, figs. 39, 40.

Hab.—Nongkodjadar, January, 1911. Four specimens. The largest specimen is nearly quite flat above.

7. HELICARION ADOLFI, Boettger.

Boettger, *Bericht Senckenb. naturf. Gesellsch.*, p. 138, pl. v, fig. 1, 1890.

Hab.—Gunung Gedeh, March, 1911, one specimen; Gunung Ungaran, September, 1910, one specimen.

This species, which is characterized by excessively fine spiral striae below the suture and at the base of shell, was found originally on the Gunung Salak by Strubell, and it seems to be rather common, at least Fruhstorfer has collected it at several other localities in Java.

8. PARMARION PUPILLARIS, Humbert.

Humbert, *Mém. Soc. phys. et Hist. nat. Genève*, vol. xvii, 1863, p. 109, fig. 1; v. Martens, *Ostas. Landschn.*, p. 179, pl. v, figs. 7, 8, pl. xii, fig. 3; Simroth, in *Zool. Ergebn. einer Reise in Ost Indien*, vol. III, p. 106, pl. vii, figs. 3, 7, 10, pl. viii, figs. 16, 17.

Hab.—Gunung Ungaran, September, 1910. One specimen.

This specimen has a dark shell with the characteristic folds at its right side.

9. PARMARION (?) sp.

Hab.—Gunung Ungaran, September, 1910. Two specimens.

The largest of the two specimens has a length of scarcely 10 mm., and is too young for identification; the shell in situ seems to be white.

10. MICROPARMARION JACOBSONI, n.sp. Pl. X, Figs. 3-8.

Hab.—Nongkodjadjar, January, 1911. Three specimens.

Animal dark grey-brown, with a reddish tint, more predominating in the smaller specimens, in the adult the dorsal anterior part darker, with traces of a blackish longitudinal band on each side behind the tentacles, very conspicuous in young ones, and a blackish streak on each side of the tail; mantle of the same colour as body, with faint blackish spots, likewise conspicuous in the young; body and mantle rugose, but without warts; peripodial groove distinct, fringe with very faint dark lineoles at the anterior and posterior parts, particularly faint in the adult. Keel of intestinal sac rather sharp, with a few dark spots. Foot-sole with a median part, but little darker than the sides of body, lateral parts darker. Caudal keel sharp, of slightly lighter colour; caudal mucous pore an oblique slit. Length in alcohol about 40 mm.

Shell convex, oval, with bluntly rounded anterior margin, running with rounded angles in the lateral margins, covered by a brownish-yellow epidermis, projecting beyond the sides. No trace of spire. Of the generative organs the vestibule is small, the receptacular duct is short, only represented by a narrow part of the receptaculum seminis, which is a large oblong sac, attenuated at its distal part; the penis is swollen in its proximal part, contracted at its entrance in the vestibule, distally it is hooked on one side, with a blunt point at the other side, where the vas deferens ends it is rounded, below the hook-like top a rather long retractile muscle is inserted; the free oviduct is rather long, more distally with a swollen vaginal part, again attenuated towards the vestibule; the dart-sac is oblong, roundedly attenuated towards its distal, strongly attenuated towards its proximal end, no retractor muscle visible. Dart, unfortunately broken, consisting of a slender calcareous rod, with a broad base; the point is wanting.

Type-specimen in my collection, cotypes in the Leyden Museum.

As I could not identify this species with any of the described ones, I asked the advice of Mr. Collinge, who had the kindness not only to examine it for me, but to make a dissection and to send a sketch or drawing of the generative organs, adding that it was a new species of *Microparmarion* on account of its dart. The shell itself agrees more with that of *Parmarion*, as well as the rather sharp keel of the intestinal sac. In shell character it agrees with *M. Austeni*, Simr. ("Ueber einige *Parmarion* Arten," in Weber's Zool. Ergebnisse einer Reise in Niederl. Ost Indien, p. 109). Simroth says of the shell: "Die Schale ist beträchtlich stärker gewölbt, als bei den vorigen (*M. Strubelli*), das Gewinde scheint völlig resorbiert zu sein."

Collinge writes that the new species is nearly allied to *M. Javanica*, Coll. (Ann. and Mag. Nat. Hist., ser. vii, vol. iv, p. 400, pl. viii, figs. 11-19, 1899). This concerns the generative organs, for in its external characters it is very different in many respects, especially by its relatively smooth surface, which is densely set with warts in *M. Javanica*, and the shell has a well-developed spire. As to the

generative organs, the new species differs from *M. Javanica* by its small vestibule, which is large, triangularly rounded in *Javanica*; that species has a much smaller and pyriform receptaculum seminis, and the penis is quite different in shape, the vaginal part is not swollen, etc. Though the specimens vary in colour, the younger ones being more distinctly marked with black, they will, however, probably belong to one and the same species, the differences are certainly not stronger than those figured by Simroth (loc. cit., pl. vii, figs. 6a, 6b) as the adult and young of *Parmarion Weberi*.

11. MICROGYSTINA INFANS, Pfeiffer.

Pfeiffer, Proc. Zool. Soc. Lond., 1854, p. 290; id., Monogr. Heliceorum, vol. iv, p. 51; Reeve, Conch. Icon., vol. vii, *Helix*, fig. 1417; Martens, Ostas. Landsehn., p. 243; Boettger, Bericht der Senckenb. naturf. Gesellsch., 1891, p. 257.

Hab.—Nongkodjadjar, January, 1911. One specimen.

The species seems to be somewhat variable, the whorls of the specimen are a trifle narrower than the majority of those I received from different sources from Java, but it agrees rather well with a not yet described var. *rufula*, Boettg., which is slightly smaller and darker than those denoted as typical.

12. PLECTOTROPIS TENGGERICA, n.sp. Pl. X, Figs. 9–11.

Shell comparatively narrowly umbilicated, thin, fragile, yellowish-brown, depressed, spire conoidal, periphery with an obtuse angle or keel, obsolete near aperture, whorls $5\frac{1}{2}$, rather regularly increasing, last one slightly broader, moderately convex, with a shallow suture, slightly descending towards the aperture. Sculpture consisting of fine, rather irregular plicæ, the whole shell with short hairs. Aperture moderately oblique, broadly lunar, peristome regularly rounded (not quite developed), columellar margin reflected at and partly covering the umbilicus.

Diam. maj. 10, alt. 6.5 mm.; apert., alt. (diagonally) 4.5, lat. 4 mm.; diam. of umbilicus, 2 mm.

Hab.—Nongkodjadjar, January, 1911. Two specimens. Type in my collection, cotype in Leyden Museum.

Though these specimens are not quite developed, the peristome being still thin and fragile, I thought it fit to name them. The nearest ally is *P. Schepmani*, Mlldff. (Nachrichtsbl. d. D. Mal. Gesellsch., 1897, p. 68), by its narrow umbilicus; compared with a cotype presented by Professor Boettger, who originally named but did not describe it, the shell is higher, the keel more obtuse; that species is conspicuously spirally striated, and shows no traces of hairs or even scars. *P. Winteriana* and *Sumatrana* are still more remote.

13. CHLORITIS CRASSULA, Philippi.

Philippi, Abbild. neuer Conch., vol. i, p. 152, *Helix*, pl. v, fig. 3; v. Martens, Ostas. Landsehn., p. 276; Boettger, Bericht Senckenb. naturf. Gesellsch., 1890, p. 144, pl. v, fig. 7.

Hab.—Gunung Gedeh, March, 1911. One specimen.

The specimen, which is young, agrees very well with Philippi's figure of a young shell, but in such forms comparison with a rather obscure figure may always leave some doubt; Boettger has figured a very complete specimen from the Gunung Salak; I can see no difference in my other specimens from Java, as far as concerns shape and sculpture, but of course the characters of aperture remain undecided.

14. *AMPHIDROMUS PALACEUS* (v. d. Busch), Mousson.

Mousson, Land- u. Süßsw. Moll. von Java, p. 28, pl. iii, fig. 1;
v. Martens, Ostas. Landschn., p. 352; Pilsbry, Man. Conch.,
ser. II, vol. xiii, p. 134, pl. xlvii, figs. 1, 2, 4-6.

Hab.—Babakan, March, 1911. One specimen.

Agreeing in shape and rather coarse sculpture with the existing figures and with specimens I could compare, the only difference is that the specimen has in all five blackish streaks, one large preceded by a narrow one above the point of junction of the peristome, one on the back of the last whorl, and two narrow ones on the penultimate whorl; of these latter two I find no mention in literature. *A. perversus*, which is a many-streaked species, is much smoother. V. d. Busch has not described this species.

15. *AMPHIDROMUS FURCILLATUS*, Mousson.

Mousson, Land- u. Süßwasser Moll. von Java, pp. 32, 115, pl. iii,
fig. 3; v. Martens, Ostas. Landschn., p. 357, pl. xxi, fig. 3;
Pilsbry, Man. Conch., ser. II, vol. xiii, p. 216, pl. lxvi,
figs. 38-40.

Hab.—Nongkodjadjar, January, 1911. Two specimens.

A very variable species as regards colour-markings; the specimens under consideration belong to a variety with the flammules but rarely bifurcated.

16. *PSEUDOPARTULA GALERICULUM*, Mousson.

Mousson, Land- u. Süßwasser Moll. von Java, p. 34, pl. iii, fig. 5;
v. Martens, Ostas. Landschn., p. 324.

Hab.—Nusa Kambangan, March, 1911. One specimen.

A little larger than Mousson's type (19 instead of 17 mm.) and without the blackish top, but otherwise perfectly agreeing with his description. The species seems to be rather variable in shape and colour-markings. I possess several specimens with and without dark top, with and without the brownish band in the aperture, quite white and with a peripheral band, but all agree in their principal characters.

17. *VAGINULA STRUBELLI*, Simroth.

Simroth, Sitzungsber. naturf. Gesellsch. Leipzig, 1891-2, pp. 58, 84;
id., Abh. der Senckenb. naturf. Gesellsch., vol. xxiv, p. 137,
pl. xiv, figs. 1-6, 9, 1897; v. Martens, in Weber, Zool. Ergebn.
Reise Niederl. Ost Indien, vol. II, p. 247.

Hab.—Samarang, November, 1909, June, July, 1910. Three specimens.

One of the specimens, taken in November, is young, and the hyponotum is but faintly spotted with blackish; the notum is likewise of a lighter colour than in the larger specimens.

18. *SUCCINEA JAVANICA*, n.sp. Pl. X, Figs. 12, 13.

Shell ovate, with short spire, pellucid, amber-coloured. Whorls about three, rather convex, but more flattened at their upper part. Sculpture consisting of numerous fine growth-lines, and at intervals stronger ones, which have the character of folds, especially on the dorsal side of last whorl, and more conspicuous below the suture; moreover, the shell has a fine sculpture, only visible under a strong lens or low power of the microscope, consisting of oblique protractive and retractive lines, which intercross and give a dull appearance to the shell; last whorl rather oblique. Aperture oval, with a moderately sharp angle above, peristome thin. Columella forming a blunt angle with body-whorl, with a sharp edge from body-whorl to regularly rounded basal margin; no trace of umbilicus, the columellar margin of body-whorl, with a narrow thin layer of enamel, more conspicuous and circumscribed in its lower half, until the point of junction with the basal margin.

Alt. 9, lat. 5.5 mm.; apert., alt. 6.5, lat. 3.5 mm.

Hab.—Tuntang River, October, 1910. One specimen in my collection.

This species seems to be very different from *S. obesa*, v. Martens (Ostas. Landsehn., p. 387, pl. xxii, fig. 21), which is much more convex, less oblique, and has no peculiar sculpture. The only species from the archipelago of which I find a description of such sculpture is *S. solidula*, Pfr. (Proc. Zool. Soc. Lond., 1849, p. 134), afterwards described and figured by Smith (loc. cit., 1887, p. 518, fig. 1, woodcut, and Christmas Island Monograph, 1900, p. 56, pl. viii, figs. 8, 9), but in that species the whorls are more convex below the suture, accordingly the shell has a less elongated appearance, and the columellar side is less angular at the point of junction of upper part of columella and body-whorl. *S. gracilis*, Lea, which has been recorded from Java with doubt, is quite different according to Pfeiffer's description (Mon. Helic., vol. ii, p. 518), and *S. subrugata*, Pfr., which might have a secondary sculpture, according to Pfeiffer (loc. cit., vol. iii, p. 10), "vix nitidula, quasi pruinosa," is from Borneo, and differs in many respects.

19. *LIMNÆA JAVANICA*, Mousson, var.

Mousson, Land- u. Süßw. Moll. von Java, p. 42, pl. v, fig. 1; v. Martens, Conch. Mitth., vol. i, p. 87, pl. xvi, figs. 1-10; id., Süß- u. Brackwasser-Moll. des Ind. Archipels, p. 3, pl. i, figs. 3-7; pl. xii, figs. 2, 4.

Hab.—Tuntang River, October, 1910. Six specimens.

The specimens of this very variable species are young, and only one of them seems to be full-grown, but is unfortunately broken.

Of the quoted figures those of var. *intumescens*, v. Martens (Conch. Mitth., figs. 2-4), come nearest, but have the subangular shoulder still more pronounced.

20. CANIDIA HELENA (Meder.), Philippi.

Philippi, Abbild. neuer Conch., vol. ii, p. 170, *Melania*, pl. iv, fig. 4;
 Mousson, Land- u. Süßsw. Moll. von Java, p. 64, pl. x, fig. 2;
 v. Martens, Süß.- u. Brackw. Moll. des Ind. Archipels, p. 75.

Hab.—Tuntang River, October, 1910. Two specimens.

This species has not yet been recorded from Samarang. The western localities recorded by v. Martens are Batavia and Preanger Regencies; the most eastern one in Java is Surabaya; Fruhstorfer has collected it at Sukabumi. Though both specimens are only dead shells they are noteworthy, as they fill up a gap in the geographical distribution of the species.

21. AMPULLARIA SCUTATA, MOUSSON.

Mousson, Land- u. Süßsw. Moll. von Java, p. 60, pl. viii, fig. 2;
 Philippi, Martini-Chemn. Conch. Cab., 2nd ed., *Ampullaria*, p. 9,
 pl. i, figs. 4-6; v. Martens, Süß.- u. Brackw. Moll. des Ind.
 Archipels, p. 18.

Hab.—Djocja, February, 1911. Three specimens.

I have followed the views of v. Martens, who considers the name *conica*, Gray, in Wood's *Index Test.* too doubtful to apply it to this species from Java, which has been so clearly characterized by Mousson, though Gray's name should have priority. The operculum, which is one of the best characters distinguishing it from *A. ampullacea*, Linn., is very well represented by the quoted figure 6 of Philippi and by Mousson.

22. MELANIA TESTUDINARIA, v. d. Busch.

v. d. Busch in Philippi, Abbild. neuer Conch., vol. i, p. 3, pl. i,
 fig. 14; Mousson, Land- u. Süßsw. Moll. von Java, p. 66, pl. xi,
 figs. 1-3; Brot, Martini-Chemn. Conch. Cab., 2nd ed., *Melanidæ*,
 p. 49, pl. vi, fig. 3; v. Martens, Süß.- u. Brackw. Moll. des
 Ind. Archipels, p. 31.

Hab.—Tuntang River, October, 1910. Fourteen specimens.

The specimens agree rather well with Mousson's fig. 3. The flammules are sufficiently conspicuous in well-preserved shells, but many of them are much eroded. One specimen is remarkable for the shape of its aperture. The shell evidently has been repeatedly broken and repaired by the animal, and consequently the base is quite flattened, and has a superficial resemblance with some forms of the American genus *Pleurocera*, e.g. *P. canaliculatum*, Say; but comparison with the other specimens from the same locality leaves no doubt about its true position:

23. MELANIA sp.

Hab.—Tuntang River, October, 1910. Three specimens.

The collection contains three ribbed specimens, one large one, which is too much eroded for identification and has the aperture broken, and two small specimens too young for determination.

24. MELANIA SCABRA, Müll., var. MUTICA, v. Martens.

v. Martens, Süss - u. Brackw. Moll. des Ind. Archipels, p. 64, pl. iv, figs. 9-12; Brot, Martini-Chemn. Conch. Cab., 2nd ed., Melanidæ, p. 268, pl. xxvii, figs. 14*d-e*.

Hab.—Tuntang River, October, 1910. Three specimens.

These specimens differ from the type by the obsolete ribs of the upper whorls, which are entirely lacking on the last whorl, and in one shell even on the penultimate whorl; this latter specimen has dark spots below the suture and near the periphery, and agrees in this respect with Brot's fig. 15*a* of the same plate.

25. LEPTOPOMA ALTUM, Möllendorff.

Möllendorff, Nachrichtsbl. d. Deutschen Malak. Gesellsch., 1897, p. 90.

Hab.—Nusa Kambangan, March, 1911. One specimen.

This operculate land shell sufficiently agrees with v. Möllendorff's description, as far as concerns shape and sculpture; in colour it better agrees with one of the specimens received from Fruhstorfer, and identified by the author, the last whorl of the specimen under consideration being for a large part yellowish-brown, with exception of a narrow peripheral band, a larger basal zone, and a few narrow infrasutural zones which are whitish. The species seems to be rather variable in colour-markings.

26. LAGOCHILUS TROCHIFORMIS, n.sp. Pl. X, Figs. 14-16.

Shell narrowly umbilicated, umbilicus partly covered; shell sub-conical, with high spire, rather solid, sub-pellucid, yellowish, with purple-brown flames, reaching in last whorl from suture to the interior of umbilicus. Whorls $5\frac{1}{2}$, convex, about two upper ones forming a smooth, shining, dark, corneous apex; suture deep. Sculpture consisting of fine spiral striæ and stronger spiral liræ, four in number on penultimate whorl, about eight on last whorl, and a few fainter ones; the whorls are crossed by conspicuous oblique growth-lines; rather short black hairs are visible on some parts of the liræ, and shorter ones on other parts, but they are mostly rubbed off. Aperture nearly circular, above with the characteristic incision, diagonal, partly double, the interior margin with a narrow, bluish-white, thickened rim, external one narrow, formed of several corneous layers. Interior of aperture flamed by the transparency of shell. Alt. 6.5, lat. 6 mm.; apert alt. (diagonally) 2.75, lat. 2.5 mm.

Hab.—Gunung Ungaran, September, 1910. One specimen in my collection.

This species is the highest one known from Java. *L. convexum*,

Mildf. (Nachrichtsbl. D. Mal. Gesellsch., 1897, p. 91), according to description should come nearest in this respect, but my specimens, formerly examined by v. Möllendorff, as well as one I received for comparison from the Museum of Berlin, are larger and more depressed. It differs moreover by the larger number of keels, a less oblique, more circular aperture, a narrower umbilicus, and by colour. *L. obliquistriatus*, Bullen (Proc. Mal. Soc. Lond., vol. vi, p. 110, pl. vi, figs. 4, 5), which is also a rather high shell, has a much larger (sixteen to eighteen) number of spiral liræ; in *L. trochulus*, v. Martens (Ostas. Landschn., p. 141), on the contrary, it is considerably smaller.

27. *NERITA LINEATA*, Chemnitz.

Chemnitz, Conch. Cab., vol. v, p. 297, pl. exci, figs. 1958, 1959; Reeve, Conch. Icon., vol. ix, *Nerita*, fig. 13; v. Martens, Martini-Chemn., Conch. Cab., 2nd ed., *Nerita*, p. 15, pl. i, figs. 3, 4; pl. iv, figs. 12-15.

Hab.—Tjilatjap, March, 1911. Two specimens.

This is the only marine species. The specimens are quite typical. Native name Susuk daun.

28. *NERITINA (CLITHON) BREVISPIGA*, Lamarek.

Lamarek, Anim. sans Vert., 2nd ed., vol. viii, p. 572; Mousson, Land- u. Süsw. Moll. von Java, pp. 83, 118, pl. xii, fig. 12; pl. xx, fig. 11; pl. xxii, figs. 6, 7 (*Corona australis*); Reeve, Conch. Icon., vol. ix, *Neritina*, fig. 28; v. Martens, Martini-Chemn. Conch. Cab., 2nd ed., *Neritina*, p. 156, pl. xvii, figs. 1-4, 9; id., Süsw.- u. Brackw. Moll. des Ind. Archipels, p. 79.

Hab.—Small river, Nusa Kambangan, March, 1911. Twenty-two specimens.

Rather small and variable in colour, but quite typical. Native name Keong batu.

29. *SEPTARIA SUBORBICULARIS*, Sowerby.

Sowerby, Cat. Tankerville, p. 10; v. Martens, Martini-Chemn. Conch. Cab., 2nd ed., *Navicella*, p. 31, pl. vi, figs. 5-8, 14; id., Süsw.- u. Brackw. Moll. des Ind. Archipels, p. 84.

Hab.—Nusa Kambangan, March, 1911. Six specimens.

The specimens are marked with oblong lighter spots near the margin; some specimens come near to the sub-variety *furcato-radiata*, v. Martens, but they still belong to the type.

30. *CORBICULA DUCALIS*, Prime.

Prime, Proc. Boston Soc. Nat. Hist., vol. viii, p. 274, 1862; Philippi, Abbild. neuer Conch., vol. ii, p. 76, *Cyrena*, pl. i, fig. 3 (*fluminea*); Mousson, Land- u. Süsw. Moll. von Java, p. 87, pl. xv, fig. 3 (*fluminea*); Clessin, Martini-Chemn. Conch. Cab., 2nd ed., Cycladeen, p. 184, pl. xxxii, figs. 5-6; v. Martens, Süsw.- u. Brackw. Moll. des Ind. Archipels, p. 114.

Hab.—Tuntang River, October, 1910. Nine specimens.

This species, which I have also received from Sumatra, has been often named *C. fluminea*, Müll., which according to v. Martens is a species from China.

EXPLANATION OF PLATE X.

- FIGS. 1, 2. *Vitrinopsis Collingei*, n.sp. $\times 1\frac{2}{3}$.
 ,, 3, 4. *Microparmarion Jacobsoni*, n.sp. Nat. size.
 ,, 5. Shell of same, upper side. Nat. size.
 ,, 6. Shell of same, inner side. Nat. size.
 ,, 7. Generative organs of same. $\times 2$. *Alb.gl.* albumen gland; *d.s.* dart-sac; *f.ov.* free oviduct; *h.d.* hermaphrodite duct; *h.gl.* hermaphrodite gland; *ov.* oviduct; *p.* penis; *pr.* prostate; *r.m.* retractor muscle; *r.s.* receptaculum seminis; *v.* vestibule; *v.d.* vas deferens; *v.g.* vagina.
 ,, 8. Part of dart of same, enlarged.
 ,, 9-11. *Plectotropis Tenggerica*, n.sp. $\times 2$.
 ,, 12, 13. *Succinea Javanica*, n.sp. $\times 2$.
 ,, 14-16. *Lagochilus trochiformis*, n.sp. $\times 2$.